REMARKS

Claim status

Claims 1-60 were pending in the case at the time of the current Office Action. Claims 8-9, 11, 20-21, 30-31, 47, 50, 52-53, and 57-60 are currently amended herein simply to correct minor informalities, not for patentability. Claims 39-46 are cancelled herein. Claims 1-38 and 47-60 are currently pending in the application.

Claim Objections

In the current Office action, claim 11 is objected to under 37 CFR 1.75(c) as being improper form because a multiple dependent on claims 5 or 10.

Claim 11 has been amended herein to depend only from claim 10. Applicants respectfully request that the objection be withdrawn.

In the current Office action, claims 39-46 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 31-38.

Claims 39-46 have been cancelled herein. Applicants respectfully request that the objection be withdrawn.

Section 102 rejections

In the current Office action, claims 1-3, 18-27, 29-38, and 48-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Fritz et al. (U.S. Patent 6,134,552).

Applicants respectfully traverse the foregoing rejections in view of the above pending claims and for reasons set forth hereafter.

Independent claim 1 recites a method of document management utilizing document corpora comprising:

gathering a source corpus of documents in electronic form;

modeling the source corpus in terms of document and domain structure information to identify corpus enhancement parameters;

using a metalanguage to electronically tag the source corpus;

programming the corpus enhancement parameters into an intelligent agent; and

using the intelligent agent to search external repositories to find similar terms and structures, and return them to the source corpora, whereby the source corpus is enhanced to form a unicorpus.

It is respectfully submitted that Fritz et al. (U.S. Pat. No. 6,134,552), hereinafter Fritz, does not teach or suggest the invention of independent claim 1. The systems described by Fritz have very little resemblance in purpose, structure, or function to the claimed invention. Fritz describes a modest document management and storage system with various features that allow for the aggregation of different physical and content versions of documents and their association with logical objects. The system of Fritz is a multi-user version control system. Fritz does not deal in any substantive way with multiple languages, concept-based glossaries, or with the discovery and tagging of internal linguistic and document features and structures as does the claimed invention. Fritz does not teach or suggest any of the main features of the claimed invention including:

- analysis of a document collection for the purposes of discovering and tagging internal document features and structures;

- use of analysis to build models of a document collection for the purposes of creating parameters that can be used by intelligent agents to enhance (expand) the corpus for specific purposes including translation;

- use of statistical corpus analysis techniques during the modeling process;

- replication method for creating multiple language versions.

Fritz describes, in Figure 1 elements 104 and 106, a process for the "checking in/out" of a single physical object (file) for the purpose of editing or viewing based upon access controls defined in the IR Administration Data. The IR Administration Data provides controls that lock the file to prevent simultaneous access and assures that all changes to the file are incorporated before allowing another user to access the file. Thus, the locking of the file eliminates the inadvertent overwriting of the file that might occur if multiple users simultaneously attempted to edit the file.

The claimed invention instead describes a process for simultaneously gathering multiple documents without prior consideration of the documents' meta-information for the purpose of modeling. In essence, documents are collected and an analysis is conducted to extract and build meta-information about the collection such that enhancement parameters may be created. The gathering of documents in the claimed invention is different with respect to both the method and purpose of Fritz. While Fritz, in Figure 1 elements 104 and 106, merely describes an access control methodology which either allows or prevents access to a file, the claimed invention describes an aggregation process for the purpose of developing enhancement parameters and building a multi-purpose corpus. Fritz does not teach or suggest aggregating documents for the purpose of translation or localization.

Figure 3 elements 304 and 306 of Fritz illustrate that physical objects (files) held within Fritz's information repository use meta-language as descriptors of those physical objects (files). Such descriptors are applied to the physical object and are used purely for informational purposes to distinguish multiple versions of the physical object such that when a client viewing application (usually an internet browser or document editor like Microsoft Word) makes a request of the logical object, the proper physical object can be displayed according to the metadata settings of the viewer application. For example, if within the Fritz information repository there exists the generic logical object "Owners Manual" and the physical objects "English Owners Manual", "French Owners Manual", "Spanish Owners Manual", and "Italian Owners Manual", then should a client select the link to the generic logical object "Owners Manual", the internal language setting of the viewer application will tell the information repository which physical object to display, based upon the language preference setting within the viewer application. If the language setting in the viewer application is set to French, then the physical object "French Owners Manual" will be displayed. No modeling of the document is conducted since, as the name implies, the "physical object" physically exists as an electronic file within the information repository. Further, the word "translation" appears in Figure 3 of Fritz and is nothing more than a description illustrating other language versions that already exist as physical objects within the information repository. No translation, machine or otherwise, is actually carried out or intended in Fritz.

Fritz is unlike the claimed invention where modeling is used on a collection of documents to derive meta-information about the documents. The meta-information describes domain content (terminology) and document structure where such explicit information did not previously exist. The claimed invention uses this meta-information to enhance and give structure to the corpus. In other words, the document analysis and modeling and creation of the meta-information in the claimed invention is used as a blue print for discovering and defining document and domain (content) structure rather than merely as descriptors. Via this modeling, parameters are created that previously did not exist which gives the collection of documents (corpus) structure. No such process of information discovery is taught or suggested by Fritz.

While Fritz demonstrates in Figure 1 element 108 the use of a quasi-intelligent agent, the agent in this case is designed purely for access control issues. In Figure 14 element 1408, Fritz indicates either a "structure relation", "structure relation for one context", or "version relation" based on meta-information. These few relations by no means comprise a corpus or unicorpus as in the claimed invention and referred to by the Examiner in reference to "IR Report v4.0" and element 304. The enhanced unicorpus of the claimed invention contains a great variety of objects useful to translation, localization, or authoring and does not contain access control relations. Though multiple language versions, formats, or releases might exist in Fritz, it is important to remember that these physical objects were created outside of the information repository and imported in as whole physical objects. No modeling or analysis of these physical objects occur in Fritz and as such the collection of documents is "unmoldeled" when imported and does not undergo modeling or analysis as in the claimed invention.

The document collections described by Fritz contain no structure or enhancement parameters produced by agents. This is different than the claimed invention in both form and function, as the claimed invention's use of meta-information is to define and create detailed search parameters for adding documents to a collection for the purpose of further modeling and analysis (enhancement) and later use in translation and related or other tasks. The claimed invention is not primarily a system for cataloguing and version control of unmodeled physical objects as in Fritz. Further, the purpose of the intelligent agent in the claimed invention is to seek similar terms and structures in external repositories and return these found terms and structures along with the host document to enhance the source corpus to form an enhanced

unicorpus. In the claimed invention, the meta-information is used to create parameters derived from the original collection of documents that are programmed into an intelligent agent which then seeks similar terms and structures in a completely separate and distinct repository from the original collection, and imports the results of that search back into the original collection to create an enhanced unicorpus. There is no attempt to coordinate physical objects (files) within either the corpus or unicorpus, unlike Fritz, whose whole system involves coordinating access to and the viewing and editing of physical objects within the information repository.

Therefore, in view of at least the foregoing, it is respectfully submitted that independent claim 1 is not anticipated by nor in any way made obvious in view of Fritz, and it is respectfully submitted that independent claim 1 defines allowable subject matter. Also, since claims 2-3 and 18-19 depend either directly or indirectly from claim 1, it is respectfully submitted that claims 2-3 and 18-19 define allowable subject matter as well. Applicants respectfully request that the rejection of claims 1-3, and 18-19 under 35 U.S.C. 102(b) be removed.

Independent claim 20 recites a global documentation method comprising:

modeling a source corpus to determine search parameters;

providing the search parameters to an intelligent agent;

enhancing the source corpus by accessing resources outside of the source corpus with the intelligent agent, where said intelligent agent tags the modeled source corpus and retrieves resources according to the search parameters to create a first unicorpus of tagged documents;

replicating the first unicorpus in at least one other language to form a second unicorpus; and

selectively mining at least one unicorpus to perform a selected task.

It is respectfully submitted that Fritz et al. (U.S. Pat. No. 6,134,552), hereinafter Fritz, does not teach or suggest the invention of independent claim 20. In Figure 5 of Fritz, we again see that Fritz's Context Attribute is little more than meta-information or descriptions of the physical object held within the Information Repository that a viewer application uses for versioning purposes to resolve displaying the appropriate physical object within the viewer

application. Even in Fritz's detailed description of the preferred embodiment, he states, "a user who is logged on to the 1995 release of the application system in English and has a Web Browser installed as a viewer would typically like to see the English HTML version of the document. The context attributes as shown in Fig. 5 in this case would be logon language 502, viewer application 504, and the release of application 506 itself, which is mapped for use in the context resolution system." In other words, as the web browser selects the link to the logical object, the browser is checked to determine its language preference (Element 502), the viewer application in terms of file format which will ultimately display the physical object, i.e. Internet Explorer, Adobe Acrobat, Microsoft Word, (Element 504) and lastly the version of the viewing application itself, i.e. Internet Explorer 4, Adobe Acrobat 5, Microsoft Word 97, (Element 506) to determine which physical object within the Information Repository to display in the viewer application.

As stated above in the response to the rejection of claim 1, Fritz merely describes an access control methodology and a method of physical object resolution. Though meta-information identifying the context attributes of language, format, or release exist and is used, it was not generated by analysis. No modeling or analysis of the physical objects contained in the information repository occur and as such the system and collection of documents described by Fritz produces and contains no "enhanced" structures (structures discovered by analysis and modeling) and does not produce enhancement parameters for programming an intelligent agent.

Again, claims 1 and 20 differ from Fritz in that the claimed invention's use of meta-information is to define and create detailed search parameters and to uncover useful linguistic and document features for future use in translation and other activities. It is not merely for labelling physical objects. Further, the purpose of the intelligent agent of the claimed invention is to seek similar terms and structures in external repositories and return them to the source corpus to form an enhanced unicorpus. In other words, the meta-information is used to create search parameters derived from the original collection of documents that are programmed into an intelligent agent which then seeks similar terms and structures in a completely separate and distinct repository from the original collection, and imports the results of that search back into the original collection to create an enhanced unicorpus.

Figure 1a elements 146 and 148 of Fritz merely indicate that access to the physical objects contained in the information repository may be allowed through a web server. In Fritz's

detailed description of the preferred embodiment, he states, "Clients may access the IR Web Server through the standard protocols HTTP and/or File Transfer Protocol (FTP) through HTTP server 146 and FTP server 148 which reside on the Web server." This is not the same as the claimed invention of claim 20 where the intelligent agent uses the modeling meta-information to search separate and distinct external repositories. Further, the intelligent agent of the claimed invention is created for the express purpose of retrieving terms and structures from any repository, including external repositories, and unlike Fritz where the physical objects displayed must reside in his information repository, the terms and structures found by the claimed invention's intelligent agent do not have to reside in a homogeneous information repository.

As to the limitation of replicating the corpus as in claim 20, Figures 3 and 4 of Fritz are not valid comparisons. While both the claimed invention and Fritz use meta-information tags to describe and identify the attributes of those physical objects contained in either the source corpus or information repository, how those tags are created and used is where the differences lie. The claimed invention models/analyzes a corpus for the purpose of uncovering and tagging useful linguistic and document features. The modeling of the discovered and tagged features can be used for the purpose of finding similar terms and structures across languages via an intelligent agent. The process can discover and automatically create an entirely new corpus in another language. As previously indicated, Fritz merely uses meta-information tags as descriptors or labels of the physical objects within the information repository and no modeling or creation of new physical objects occurs. Fritz does not describe anywhere the process of the replication of a corpus or information repository across language.

Therefore, in view of at least the foregoing, it is respectfully submitted that independent claim 20 is not anticipated by Fritz, and that independent claim 20 defines allowable subject matter. Also, since claims 21-27 and 29 depend either directly or indirectly from claim 20, it is respectfully submitted that claims 21-27 and 29 define allowable subject matter as well. Applicants respectfully request that the rejection of claims 20-27 and 29 under 35 U.S.C. 102(b) be removed.

Independent claim 30 recites a document management method comprising:

constructing models of a source corpus of documents;

deriving parameters from said models for the operation of an intelligent agent over at least one external document repository; and

enhancing the source corpus of documents by adding selected documents retrieved by the intelligent agent to form an artificially enhanced corpus.

It is respectfully submitted that Fritz et al. (U.S. Pat. No. 6,134,552), hereinafter Fritz, does not teach or suggest the invention of independent claim 30. The Examiner seems to indicate that element 306 in Figure 3 of Fritz is a model of element 304 in Figure 3 of Fritz. Applicants respectfully believe that this is an inaccurate interpretation of both Fritz and the claimed invention. When Fritz uses the term "model", this is really referring to the three-tiered content model as illustrated in Figure 2 of Fritz. Figure 3 of Fritz is merely a more detailed description of Figure 2 elements 202, 204, and 206 where elements 304 and 306 illustrate that physical objects (files) held within Fritz's information repository use meta-language as descriptors of those physical objects (files). These descriptors are applied to the physical objects and are used purely for informational purposes to distinguish multiple versions of the physical object such that when a client viewing application (usually an internet browser or document editor such as Microsoft Word) makes a request of the logical object, the proper physical object can be displayed according to the metadata settings of the viewer application.

For example, if within the Fritz information respository there exists the generic logical object "Owners Manual" and the physical objects "English Owners Manual", "French Owners Manual", "Spanish Owners Manual" and "Italian Owners Manual", then should a client select the link to the generic logical object "Owners Manual", the internal language setting of the viewer application will tell the information repository which physical object to display based upon the language preference setting within the viewer application. If the language setting in the viewer application is set to French, then the physical object "French Owners Manual" will be displayed. No modeling of the document is conducted since, as the name implies, the "physical object" physically exists as an electronic file within the information repository. Further, though the word "translation" appears in Figure 3 of Fritz, this again is nothing more than a description

illustrating other language versions that already exist as physical objects within the information repository and no translation, machine or otherwise, is actually carried out.

Again, this is unlike the claimed invention in which modeling is used on a collection of documents to derive meta-information about the documents. The meta-information describes domain content (terminology) and document structure where such explicit information did not previously exist. The claimed invention uses this meta-information to enhance and give structure to the corpus. In other words, the document analysis and modeling and creation of the meta-information in the claimed invention is used as a blueprint for discovering and defining document and domain (content) structure rather than merely as descriptors. This meta-information is then programmed into an intelligent agent which then seeks similar terms and structures in a completely separate and distinct repository for the purpose of creating an artificially enhanced unicorpus that can be used monolingually for authoring or multilingually to support computer-assisted translation or localization by automatically creating a second corpus (collection of documents) in other languages. Such a process is not taught or suggested in any way by Fritz.

Therefore, in view of at least the foregoing, it is respectfully submitted that independent claim 30 is not anticipated by Fritz, and that independent claim 30 defines allowable subject matter. Also, since claims 30-38 depend either directly or indirectly from claim 30, it is respectfully submitted that claims 30-38 define allowable subject matter as well. Applicants respectfully request that the rejection of claims 30-38 under 35 U.S.C. 102(b) be removed.

Furthermore, in view of at least the foregoing, the similar nature of independent claims 48, 50, 51, 52, 57, 59, and 60 to the previous discussions herein, and also due to the fact that Fritz does not teach or suggest using heuristic models for anything, it is respectfully submitted that independent claims 48, 50, 51, 52, 57, 59, and 60 define allowable subject matter. Since claims 49, 53-56, and 58 depend either directly or indirectly from one of these independent claims, it is respectfully submitted that claims 49, 53-56, and 58 define allowable subject matter as well. Applicants respectfully request that the rejection of claims 48-60 under 35 U.S.C. 102(b) be removed.

Section 103 rejections

In the current Office action, claims 4-17 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz et al. (U.S. Patent 6,134,552) in view of Morimoto et al. (US 6,789,057).

Applicants respectfully traverse the foregoing rejections in view of the above pending claims and for reasons set forth hereafter.

As described previously herein, independent claims 1 and 20 are not anticipated by Fritz. Also, the combination of Fritz and Morimoto et al. (US 6,789,057), hereinafter Morimoto, does not teach or suggest the invention of independent claims 1 or 20. Morimoto describes a dictionary-based machine translation system with morphological and syntactic components operating over a network. The claimed invention is not concerned with a dictionary-based system, nor is the claimed invention concerned with a free-standing machine translation system. The claimed invention offers a mechanism to create special-purpose document collections that can then be enhanced for supporting computer-assisted translation. Computer-assisted translation depends on concept-based glossaries that are not identical to Morimoto's dictionaries. The claimed invention offers a mechanism for populating dictionaries or glossaries of a type not indicated by Morimoto. Morimoto does not address concept-based glossaries as described in the present application. Morimoto also does not deal with the ability to discover other objects (related to linguistic content and document structure that are useful in translation as does the claimed invention.

The Examiner seems to assert that Morimoto teaches "analysis of undefined terms". However, a main contribution of the claimed invention is the discovery of terms in a document collection, their aggregation in a particular structure (a concept-based glossary) and their use in a specialized search procedure to discover their multilingual equivalents, which are then also aggregated into a glossary. This process occurs in a manner that is substantially different than that described by Morimoto or the combination of Fritz and Morimoto.

Further, it is respectfully submitted that it would not have been obvious to one of ordinary skill in the art to modify Fritz on the basis of Morimoto and produce the system of the claimed invention. The addition of a dictionary-based translation component to Fritz would not produce a workable system, and further, ignores a main contribution of the claimed invention,

which is a method for quickly and reliably producing the glossaries and other translation-relevant objects upon which computer-assisted translation depends.

Therefore, in view of at least the foregoing, it is respectfully submitted that neither Fritz, Morimoto, nor the combination thereof teach or suggest the claimed invention of independent claims 1 and 20, and it is respectfully submitted that independent claims 1 and 20 define allowable subject matter. Also, since claims 4-17 and 28 depend either directly or indirectly from claim 1 or claim 20, it is respectfully submitted that claims 4-17 and 28 define allowable subject matter as well. Applicants respectfully request that the rejection of claims 4-17 and 28 under 35 U.S.C. 103(a) be withdrawn.

In the current Office action, claims 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fritz et al. (U.S. Patent 6,134,552) in view of Hartrick et al. (US 5,532,920).

Applicants respectfully traverse the foregoing rejections in view of the above pending claims and for reasons set forth hereafter.

Independent claim 47 recites a document management system operating according to a business method comprising:

providing document management services including translation and authoring services over a global information network to a customer, where the customer has a source corpus of documents to be managed;

accessing the source corpus with an intelligent agent to analyze the source corpus, identify selected objects within the source corpus, and tag the selected objects with a metatag, wherein the analysis results in the generation of document parameters programmed into the intelligent agent for searching of external document repositories, wherein said intelligent agent uses said parameters to identify and tag objects of interest in said external document repositories and selectively retrieve the objects to enhance the source corpus; and

tracking rights in said retrieved objects to determine a royalty payable to an owner of the rights.

It is respectfully submitted that neither Fritz, Hartrick et al. (US 5,532,920), hereinafter Hartrick, nor the combination thereof teach or suggest the invention of independent claim 47 for at least the same reasons as given above for claims 1, 20, and 30. Applicants believe that the systems described by Fritz have very little resemblance in purpose, structure, or function to the claimed invention for reasons previously presented herein. Furthermore, Hartrick is concerned with royalty payments that are agreed to be made before copying a book. However, Hartrick is not at all concerned with accessing a source corpus with an intelligent agent to analyze the source corpus as is the claimed invention.

Therefore, in view of at least the foregoing, it is respectfully submitted that neither Fritz, Hartrick, nor the combination thereof teach or suggest the claimed invention of independent claim 47, and it is respectfully submitted that independent claims 47 defines allowable subject matter. Applicants respectfully request that the rejection of claim 47 under 35 U.S.C. 103(a) be removed.

Accordingly, the applicant respectfully requests reconsideration of the rejections and objections based on at least the foregoing. After such reconsideration, it is urged that allowance of all pending claims will be in order.

Respectfully submitted,

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